

ABSTRACT OF THE DISCLOSURE

5 To synchronize a regularly occurring pulse train to the
average of a bunched pulse train, an oscillator generates a
plurality of differently phase shifted signals at a given
frequency. One of the phase shifted signals is selected as an
output signal. The output signal is compared with the bunched
pulse train. The selected phase shifted signal is changed
10 responsive to the comparison so the output signal occurs at
the average frequency of the bunched pulse train. The
oscillator is formed as a plurality of differential amplifier
stages having equal controllable delays. The stages are
connected together to form a ring oscillator. The output
15 signal is compared with the bunched pulse train through a
FIFO. A signal representative of the state of the FIFO is
used as an error signal to control the selection of the phase
shifted signal to be used as the output signal. A phase
locked loop that synchronizes the phase shifted signal
20 generating oscillator to a frequency reference is nested in
the control loop that selects one of the phase shifted
signals as the output signal.

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